Field Manual 5-0

Exercising Command and Control in an Era of Persistent Conflict

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Of the many lessons drawn from over seven years of wartime experience, one that stands out prominently is the critical need to improve our ability to exercise the cognitive aspects of battle command—understanding and visualizing.[1]

—Lieutenant General William B. Caldwell

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PHOTO: U.S. Army Soldiers control the crowd of Haitians waiting for food and water during Operation Unified Response in Port-au-Prince, Haiti, 20 January 2010. (U.S. Air Force, MSGT Jeremy Lock)

OUR ARMY, as part of a joint interdependent force, continues to engage in full spectrum operations around the world. Several global trends—such as failing and failed states, resource demands, and proliferations of weapons of mass destruction—make it likely that the next decades will be characterized by *persistent conflict*. Protracted confrontations among state, nonstate, and individual actors that are increasingly willing to use violence to achieve their political and ideological ends appear certain. Whether reacting to natural disasters or confronting armed enemies, Army forces will continue to conduct operations in complex, ever-changing, and uncertain operational environments.

Operational experience and lessons, transformational changes, and recent revisions to Joint and Army doctrine now demand major revisions to Field Manual (FM) 5-0, *The Operations Process*. Of the many lessons learned from wartime experience since 2001, the need to improve our ability to exercise the "thinking" aspects of command and control stands out.[2] The 2010 edition of FM 5-0 represents a significant evolution in Army doctrine focusing on the cognitive aspects of command and control.

The revised FM 5-0 describes how commanders—supported by their staffs, subordinate commanders, and other partners—exercise command and control during the conduct of full spectrum operations. In operations, commanders face thinking and adaptive enemies, changing civilian perceptions, and differing agendas of various organizations in an operational area. Commanders can never predict with certainty how enemies or civilians will act and react or how events may develop. During execution, leaders must continuously anticipate, learn, and adapt to overcome the dynamics of changing circumstances and adaptive adversaries. The best outcomes require leaders to develop holistic understanding of the environment, frame problems, and

develop approaches to solve or manage those problems. From such understanding, leaders can develop simple, flexible plans that communicate their vision and intent by focusing on the results they expect to achieve. Commanders must encourage continuous collaboration across the force to better understand the situation as they adjust plans or reframe problems throughout the conduct of an operation.

Making the Manual

This revision of FM 5-0 began in parallel with the revision of FM 3-0, *Operations,* in 2006. As part of the development strategy for FM 3-0, the Combined Arms Doctrine Directorate (CADD) staffed a series of issue papers to a broad audience of military and civilian organizations to stimulate debate and gain consensus concerning the Army's direction for its capstone doctrine on operations. Topics ranged from the Army's operational concept of full spectrum operations to the construction of the warfighting functions (intelligence, movement and maneuver, fires, protection, sustainment, and command and control). Feedback from these issue papers revealed gaps to include insufficient doctrine on assessment, a need to better describe how stability operations are integrated into full spectrum operations, guidelines for command post organization and operations, and an Army position on so-called "effects-based" operations.[3] These shortfalls led to the development of Field Manual Interim (FMI) 5-0.1, *The Operations Process*, published in 2006. This interim field manual filled a significant gap in doctrine until the ideas in FM 3-0 and FM 5-0 could be fully examined, evaluated, and published. FMI 5-0.1 provided a basis for the command and control chapter of FM 3-0 as well as the foundation for the revision of FM 5-0.

During this period, the Army also examined concepts to assist commanders in understanding complex, ill-structured problems and ways to visualize approaches to solve those problems. Collectively known as "design," several organizations—such as Training and Doctrine Command's (TRADOC) Army Concepts Integration Center, the School of Advanced Military Studies (SAMS), and the Army War College—explored ways to incorporate the theories and philosophy of design into practical application for military operations. In January 2008, TRADOC Pamphlet 525-5-500, *Commander's Appreciation and Campaign Design,* captured the latest ideas of how design could enhance command and control. Simultaneously, SAMS developed and began teaching its "Art of Design" curriculum that addressed subjects ranging from the theoretical basis of design to practical application in operations through three formal exercises. Both the TRADOC pamphlet and the work from SAMS significantly influenced the incorporation of design into command and control in Army.[4]

With significant collaborative effort over the last three years, the Army developed and staffed three drafts of FM 5-0. The manual was also shared with the Joint staff, combatant commands, and selected interagency organizations, including the Department of State and the United States Agency for International Development. CADD hosted three action-officer-level councils of colonels in an effort to synthesize and integrate over 3,000 comments from various organizations over three drafts to coalesce as much expert knowledge, thought, and experience as possible. The meetings provided a separate forum for fostering debate, gaining consensus, and resolving critical and important contributions from reviewing agencies prior to the TRADOC commander's review and approval conference held in December 2009.

What is Changing and Why?

One of the first changes readers will note in the new FM 5-0 is its title. Changed from *Army Planning and Orders Production* to *The Operations Process*, the new title reflects significant modification to the material covered in FM 5-0. While retaining details of planning and planning products, the revised FM 5-0 expands the scope of the manual to include doctrine on the exercise of command and control throughout the operations process. This change is intended to better describe the dynamic relationship among all the activities of the operations process—not just planning.

The operations process is an organizational learning model consisting of the major command and control activities performed during operations: planning, preparing for, executing, and continuously assessing the operation. Commanders drive the operations process through battle command. The activities of the operations process may be sequential—especially at the start of an operation. However, once operations

have begun, a headquarters often conducts parts of each activity simultaneously and cycles through the activities of the operations process continuously as the situation requires.

While simple in concept (plan, prepare, execute, and assess), the operations process is dynamic in execution. Commanders and staffs use the operations process to integrate numerous activities consisting of hundreds of tasks executed throughout the headquarters. Commanders must organize and train their staffs to think critically and creatively as they plan, prepare, and execute operations simultaneously while continually assessing progress.

The Army's model for the exercise of command and control through the operations process is not new. The 2001 edition of FM 3-0 and the 2003 edition of FM 6-0 each addressed battle command and the operations process in detail. The 2005 edition of FM 5-0 described how planning fit within the operations process. What is new, however, is a greater emphasis of the commander's role during the conduct of operations and a more detailed description of the interrelationships among the commander, staff, subordinate commanders, and other partners in the exercise of command and control. FM 5-0 now provides doctrine on the operations process as a whole, a chapter on design, and a chapter for each activity of the operations process. The appendixes describe tactics, techniques, and procedures for organizing the headquarters to conduct the operations process, using the military decision-making process (MDMP), conducting troop-leading procedures, and writing operation plans and orders.

Building on Full Spectrum Operations

The 2005 edition of FM 5-0 focused on offensive and defensive operations both in examples and in emphasis. To better account for full spectrum operations, the revised FM 5-0 incorporates the central idea of full spectrum operations throughout the manual. The new manual emphasizes the importance of understanding the civil aspects of the operational environment in relationship to the mission, enemy, terrain and weather, troops and support available, and time. FM 5-0 now stresses the fundamental that, during operations, commanders continually consider and combine stability tasks focused on the populations with offensive and defensive tasks focused on the enemy during planning and execution. It describes ways to develop plans for full spectrum operations using lines of effort and modifies the Army's operation order to better account for civil considerations and stability or civil support tasks.

The chapter on execution describes how commanders use forces and other resources to mass effects at decisive points and times. It describes how commanders seek to seize and retain the initiative, build and maintain momentum, and exploit success. Additionally, the command and control philosophy of mission command and acceptance of prudent risk is addressed in detail in the execution chapter and throughout the new FM 5-0.

Incorporating Design into Army Doctrine

We often fail not because we fail to solve the problem we face, but because we fail to face the right problem.

—Russell L. Ackoff [5]

Full spectrum operations conducted within a population are effective only when commanders understand the issues within the context of that population. Understanding context and then deciding how, if, and when to act is a product of design and integral to the art of command. The revised FM 5-0 describes the practice of design throughout the operations process.

Design is a methodology for applying critical and creative thinking to understand, visualize, and describe complex, ill-structured problems and develop approaches to solve them. Design underpins the exercise of battle command within the operations process, guiding the iterative and often cyclic application of understanding, visualizing, and describing. Design assists with the conceptual aspects of planning to include understanding

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the operational environment and framing the problem, visualizing a desired end state, and conceptualizing a broad operational approach to solve or manage a problem situation. Commanders describe their understanding and visualization in a design concept that drives more detailed planning. Design is practiced continuously throughout the operations process. As commanders learn during execution, they update their understanding, modify their visualization, and describe their visualization to modify plans. In some instances, commanders may go beyond modifying the basic plan. They may decide to reframe the problem and develop a new operational approach resulting in an entirely new plan.

U.S. Arir Force, SSGT Dayton Mitchell

U.S. Army MG John A. McDonald, commander of U.S. Forces Afghanistan, speaks with CPT Jason Adams, a physician's assistant, Afghanistan, 20 December 2009.

The revised FM 5-0 devotes a chapter to design that describes the fundamentals of design and offers a design methodology. Design is also addressed throughout the manual to include chapters on the fundamentals of the operations process, planning, execution, and assessment. In addition, the revised appendix on the MDMP describes how design interfaces with the MDMP.

Other Changes

In addition to expanding the scope of the manual to include all the activities of the operations process and incorporating the concept of design, other significant changes in the new FM 5-0 include—

- Replacing command and control techniques and products based on the *battlefield operation systems* to the *warfighting functions*. This affects several areas, to include organizing the staff for operations and the formats for operation orders and their annexes.
- Emphasizing and accounting for how commanders use the five *Army information tasks* in shaping the operational environment.
- Describing how commanders organize their staff into command posts, command post cells, working groups, and boards to conduct the operations process.
- Updating the MDMP and operation order format to better account for design, full spectrum operations, the warfighting functions, and the five Army information tasks.

Fundamentals of the Operations Process

In addition to the principles of operations found in FM 3-0, the doctrine that FM 5-0 prescribes is built on six fundamentals:

- Commanders drive the operations process through battle command.
- Situational understanding is fundamental to effective command and control.
- Critical and creative thinking aids in understanding and decision making throughout the operations process.
- Commanders continually consider and combine tasks focused on the populations (stability or civil support operations) as well as those tasks focused on enemy forces (offensive and defensive operations).
- Mission command is the preferred method of exercising command and control.
- Continuous assessment enables organizational learning and adaptation throughout the conduct of operations.

Commanders drive the operations process through battle command. A key theme in the new FM 5-0 is the central role of the commander in the

operations process. While staffs perform essential functions that amplify the effectiveness of operations, commanders play the most important role in the operations process through battle command. Battle command is the art and science of understanding, visualizing, describing, directing, leading, and assessing operations to accomplish missions.

The relationships among the activities of battle command and the activities of the operations process are dynamic. All activities of battle command occur in planning, preparation, execution, and assessment, but take on different emphasis throughout the conduct of operations. For example, during planning, commanders focus their activities on understanding, visualizing, and describing. During execution, commanders often focus on directing, leading, and assessing while improving their understanding and modifying their visualization.

One of the major changes to the Army's model for battle command was the addition of the activity of "understanding" in the 2008 edition of FM 3-0.[6] The new FM 5-0 emphasizes the importance of developing and maintaining understanding throughout the operations process. Commanders collaborate and dialog with superior, adjacent, and subordinate commanders, and other military and civilian organizations within the area of operations to build and maintain their understanding. They also circulate throughout their areas of operations as often as possible, talking to subordinate commanders, Soldiers, and members of other military and civilian organizations as they observe operations for themselves. Commanders continuously update their understanding as the operation progresses and adjust their visualization of the operation as required. Commanders use their running estimate and the running estimates of the staff and subordinate commanders to assist them with understanding and visualization.

Situational understanding is fundamental to effective command and control. Throughout the operations process, commanders (supported by their staffs, subordinate commanders, and other partners) seek to build and maintain their situational understanding—the product of applying analysis and judgment to relevant information and knowledge—to facilitate their decision-making. Situational understanding is essential for commanders in establishing the situation's context, developing effective plans, assessing operations, and making quality decisions during execution. Commanders and staffs must continually work to maintain their situational understanding and work through periods of reduced understanding as the situation evolves.

Battle command is the art and science of understanding, visualizing, describing, directing, leading, and assessing operations to accomplish missions.

As commanders develop their situational understanding, they see patterns emerge, dissipate, and reappear in their operational environment. This helps them direct their own forces' actions with respect to other friendly forces and partners, the enemy, the terrain, and the population. While complete understanding is the ideal for planning and decision-making, it rarely exists. Commanders must accept they will often have to act despite significant gaps in their understanding.

Collaboration and dialog assist in building learning organizations and developing a shared understanding of the situation. Throughout operations, commanders, subordinate commanders, staffs, and other partners collaborate and dialog actively, sharing and questioning information, perceptions, and ideas to better understand situations and make decisions. Collaboration is two or more people or organizations working together toward common goals by sharing knowledge and building consensus. Dialog is a way to collaborate that involves the candid exchange of ideas or opinions among participants that encourages frank discussions in areas of disagreement. Effective collaboration and dialog leads to increased understanding of the situation to include the problem or problems at hand.

Critical and creative thinking aids in understanding and decision-making throughout the operations process. To assist commanders in understanding and decision-making, commanders and staff apply critical and creative thinking techniques throughout the operations process.

Critical thinking is purposeful, reflective, and self-regulating judgment to determine the meaning and significance of what is observed or expressed. Critical thinking involves determining the meaning

and significance of what is observed or expressed. It also involves determining whether adequate justification exists to accept conclusions as true, based on a given inference or argument. Critical thinking is key to understanding situations, identifying problems, finding causes, arriving at justifiable conclusions, making quality plans, and assessing the progress of operations.

Creative thinking involves creating something new or original. Often, leaders face unfamiliar problems or old problems requiring new solutions. Creative thinking leads to new insights, novel approaches, fresh perspectives, and new ways of understanding and conceiving things. Leaders look at different options to solve problems. Creative thinking includes using adaptive approaches (drawing from previous similar circumstances) or innovative approaches (coming up with completely new ideas.

Critical and creative thinking are fundamental to understanding an operational environment, framing problems, and developing operational approaches to solve or manage those problems.

Commanders continually consider and combine tasks focused on the populations (stability or civil support operations) and tasks focused on enemy forces (offensive and defensive operations). Military operations involve more than combat between armed opponents. Winning battles and engagements is critical but not sufficient for success. Shaping the civil situation is just as important to long-term success. Because of this, commanders continually consider and combine stability tasks focused on the population with offensive and defensive tasks focused on the enemy during planning and execution. For homeland security, commanders focus operations on civil support.

Mission command is the preferred method of exercising command and control. Because of the complex, uncertain, and ever changing nature of operations, mission command—as opposed to detailed command—is the preferred method for exercising command and control. *Mission command* is the conduct of military operations through decentralized execution based on mission orders. Successful mission command demands that subordinate leaders at all echelons exercise disciplined initiative, acting aggressively and independently within the commander's intent. Prerequisites for effective mission command are the use of mission orders; full familiarity with the mission, commander's intent, and concept of operations; and mutual trust and understanding between commanders and subordinates. FM 5-0 describes the philosophy of mission command as it applies to all activities of the operations process.

Creative thinking includes using adaptive approaches…

Continuous assessment enables organizational learning and adaptation throughout the conduct of operations. Assessment is a continuous activity of the operations process and a primary feedback mechanism that enables the command as a whole to learn and adapt. Assessment is also an activity of battle command. Plans are based on imperfect understanding and assumptions about how the commander expects a situation to evolve. Sometimes results fail to meet expectations or the situation evolves in a manner that was not anticipated, including unanticipated success. In these cases, the commander determines whether the results are due to a failure in implementing the plan (execution) or if the plan and its underlying logic were flawed. Continuous assessment helps commanders recognize shortcomings in the plan and changes in the situation. In those instances when assessment reveals minor variances from the commander's visualization, commanders adjust plans as required. In those instances when assessment reveals a significant variance from the commander's original visualization, commanders reframe the problem and develop an entirely new plan as required.

The Way Ahead

As part of the effort to inculcate the doctrine in FM 5-0 across the Army, the Combined Arms Center established a doctrine, education, and training working group. The purpose of this working group is to reduce the period of time between doctrine production and its use by the generating and operating force. The Command and General Staff College is leading the effort to ensure topics in FM 5-0 are sufficiently addressed in both the officer and noncommissioned officer educations systems. The Combined Arms Center-Training is leading the effort to ensure training at the combat training

centers is updated to include topics addressed in FM 5-0. The Combined Arms Doctrine Directorate is developing an FM 5-0 interactive media study guide to assist in the self-study of the operations process. In addition, the Combined Arms Center put together a mobile training team to inform and educate units across the Army concerning doctrine on the operations process.

The revised FM 5-0 resulted from a significant intellectual collaborative effort from across the Army. The revised manual provides a starting point for Army leaders in the exercise of command and control during operations. It establishes a common frame of reference and intellectual tools Army leaders use to plan, prepare for, execute, and assess operations. By establishing a common approach and language for conducting command and control, doctrine promotes mutual understanding and enhances effectiveness. The doctrine in this new manual is a guide for action rather than a set of fixed rules. While it provides an authoritative guide for leaders, it requires original applications adapted to circumstances. In operations, effective leaders possess the ability to spot when and where doctrine, training, or even their past experience no longer fit the situation, and then adapt accordingly. ***MR***

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NOTES

1. William B. Caldwell, "Design and the Art of Battle Command," reflections from Frontier Six, Combined Arms Center Blog, 6 March 2009 (17 October 2009).
2. United States Joint Forces Command memorandum, subject: "Vision for a Joint Approach to Operational Design," 6 October 2009. In this memo, General Mattis identifies the need to improve joint doctrine, training, and joint professional military education in the areas of critical and creative thinking, particularly as they relate to planning.
3. U.S. Army Field Manual-Interim (FMI) 5-0.1, *The Operations Process* and FM 3-0, *Operations,* clearly states that the Army would not adopt the joint concept of effects based operations (EBO). While aspects of the EBO concept (e.g., assessment techniques and ways to analyze the operational environment) have enhanced Army doctrine, the Army's doctrine on command and control is based on the philosophy of mission command.
4. See Colonel Stefan Banach's article, "Educating by Design: Preparing Leaders for a Complex World," *Military Review* (March-April 2009*)* and Brigadier General Huba Wass de Czege's article "Systemic Operational Design: Learning and Adapting in Complex Missions," *Military Review* (January-February 2009) for a summary of efforts that influenced the Army's thinking on the application of design for military operations.
5. Jamshid Gharajedaghi, *Systems Thinking: Managing Chaos and Complexity,* 2d ed. (Burlington, MS: Elsevier Inc., 2006), 126. In his discussion of defining problems, Gharajedaghi attributes this quote to Russel Ackoff, a pioneer in systems thinking.
6. The 2001 edition of FM 3-0 and the 2003 edition of FM 6-0 discussed understanding as part of the commander's visualization. The 2008 edition of FM 3-0 added "understanding" as an activity to the Army's battle command model to emphasize this critical activity throughout the conduct of operations.

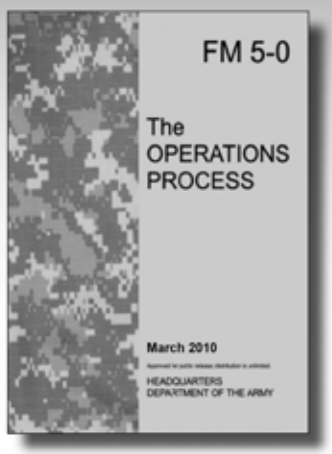
New Army Field Manual
FM 5-0, *The Operations Process*

U.S. Army Combined Arms Center
"Intellectual Center of the Army"

U.S. Army Combined Arms Doctrine Directorate (CADD)
U.S. Army Combined Arms Center (CAC), Fort Leavenworth, KS 66027

The new FM 5-0, *The Operations Process*, expands Army doctrine on the exercise of command and control during the conduct of full spectrum operations. No longer a manual strictly concerning planning, FM 5-0 now describes the relationship of all activities of the operations process – planning, preparing for, execution, and assessing operations.

In addition, for the first time in Army doctrine, the manual weaves "design" throughout the operations process. This version of FM 5-0 provides a guide for Army leaders in understanding, visualizing, and describing complex, ill-structured problems and developing approaches to solve them.

FM 5-0 is scheduled to be available for download in March 2010 at the following Combined Arms Center website: http://usacac.army.mil/cac2/fm50/

More information may be obtained by calling the U.S. Army Combined Arms Doctrine Directorate (CADD) at: (913)684-2159/ DSN 552-2159.